

**BOSCH**  
Invented for life

# AutoDome 100 Series Fixed Camera System



Bosch's AutoDome modular camera system is a revolutionary new concept in dome cameras. More than just a series of cameras, it's a dome platform built around a system of intelligent, interchangeable modules that allow you to update camera functionality quickly and cost-effectively. Using common components lets you install a basic camera system today and migrate to a more advanced version tomorrow – without having to replace the entire dome, thus protecting your initial investment.

## Interchangeable modules

The entire AutoDome system is based on five interchangeable modules: the CPU, camera, housing, communications, and power supply. Simply swap one of AutoDome's interchangeable modules and quickly upgrade from analog to IP, color to day/night, or add motion tracking and image stabilization. Never before have you had the ability to adapt a security system to your changing needs this quickly or inexpensively.

- ▶ 540TVL fixed dome series
- ▶ Fully interchangeable CPUs, cameras, housings, communications, and mounts
- ▶ Color and day/night camera options
- ▶ Available with 2.7–13.5 mm or 5–50 mm lens
- ▶ All versions allow for remote configuration and update
- ▶ Optional hybrid operation provides simultaneous analog (coax) and IP (MPEG-4) connectivity
- ▶ UTP transmission standard on all analog models
- ▶ Three-year warranty

By using the same housing components, all installations have a consistent look, and observers have no idea which type of camera (if any) is watching over them. This unique, modular design also gives you the flexibility to move cameras between different housings when special coverage is needed, or as site plan requirements change. For example, a fixed color camera over a specific area could easily be “hot-swapped” to a day/night camera without removing the power. Migrating from a fixed dome to a PTZ dome with advanced features such as AutoTrack II intelligent tracking can be done quickly and easily, without requiring dome removal or rewiring. AutoDome's Ethernet communications module allows you to add IP functionality while maintaining connectivity to existing analog inputs and outputs.

## 100 Series highlights

The AutoDome 100 Series combines the same high-quality housings used by AutoDome PTZ cameras with the award-winning imaging technology of Dinion high-resolution color or day/night fixed cameras and varifocal lenses.

The AutoDome 100 Series supports a variety of standard and optional video and data transmission methods, including Bilinx (over coax and UTP), fiber, and even TCP/IP over Ethernet. Remote control, configuration, and firmware updates can also be performed over these cables, offering you unparalleled control of your cameras.

The optional IP Communications Module has hybrid functionality to protect your current analog technology investment while providing a clear and stable migration path to fully digital, IP-based solutions. This allows you to move to IP video at your own pace – all at once or one camera at a time. And since all AutoDome modules are completely interchangeable, there is no need to replace expensive components (e.g., cameras) or labor-intensive components (e.g., mounts and housings).

## Functions

The following are some of the features that make the AutoDome 100 Series the most flexible fixed dome camera systems in the security industry.

### High-performance camera features

AutoDome 100 Series cameras have a 1/3-inch color CCD with Bosch's unique 15-bit Dinion digital imaging technology to deliver a 32-fold sensitivity improvement and a full 540 horizontal lines of resolution. In addition, AutoDome 100 Series cameras incorporate a number of features not found in other fixed dome cameras. These include:

- **XF-Dynamic** - Extends the camera's dynamic range to deliver sharper, more detailed images and outstanding color reproduction accuracy.
- **NightSense** – Automatically activated under low-light conditions to extend the 100 Series' exceptional sensitivity by a factor of three during monochrome operation.
- **SensUp** – Increases integration time by a factor of 10 to dramatically enhance sensitivity.
- **Back Light Compensation (BLC)** – A fully programmable backlight compensation (BLC) area of interest and variable BLC level let 100 Series day/night cameras overcome even the most challenging entrance, vestibule, and lobby applications.
- **Auto Black** – Enhances contrast by compensating for reduced contrast due to fog, mist, or glare.
- **Default Shutter** – Automatically adjusts to the lens opening at fast shutter speeds, eliminating motion blur and providing remarkably clear and detailed images of fast-moving objects.

AutoDome 100 Series day/night versions automatically switch from color to monochrome by removing a mechanically switching IR filter in low-light conditions. This boosts the infrared illumination sensitivity while maintaining superior image quality.

### Optional hybrid analog/IP operation

Optional hybrid connectivity allows the AutoDome to simultaneously stream IP video across a local or wide area network, and CVBS video via coaxial cabling to support existing analog equipment. Network video streams are sent over IP networks and can be viewed with the Bosch DiBos Digital Video Recorder, or on a PC running VIDOS video management software. Alternatively, a Bosch IP video decoder can be used to display the video on an analog CVBS or VGA monitor. For maximum accessibility, video can be viewed using a Web browser. The BNC connection provides direct input to a conventional analog matrix switcher or DVR, further enhancing AutoDome's viewing and recording flexibility.

### MPEG-4 encoding

AutoDome's IP Communications Module uses the latest MPEG-4 compression technology to provide DVD-quality 4CIF video at frame rates up to 25/30 PAL/NTSC images per second (IPS). The IP module also leverages bandwidth throttling and multicasting capabilities to efficiently manage bandwidth and storage requirements while delivering the best possible image quality and resolution.

### Tri-streaming video

Bosch's innovative tri-streaming feature enables AutoDomes equipped with the optional IP Communications Module to generate two independent MPEG-4 streams and a JPEG stream simultaneously. This allows you to stream high-quality images for live viewing while recording at a reduced frame rate, and at the same time, stream JPEG images to a remote PDA device.

### Unsurpassed reliability

AutoDome builds on Bosch's 10-plus years of experience designing and manufacturing dome camera systems. All AutoDome pendant housings (indoor and outdoor) are rated to provide IP 66 protection. Outdoor EnviroDome housings provide an operating temperature range down to -40°C (-40°F). The optional "XT" extended temperature kit allows AutoDome to operate in temperatures down to -55°C (-67°F), ensuring reliable operation in even the harshest environments.

All housings come standard with a rugged polycarbonate bubble, recessed set screws, and a recessed bubble latch to reduce the chance of damage from vandalism. Inside the dome, the power, data, and video are all protected against unexpected surges of power.

### Ease of installation and servicing

Bosch's innovative software, the Configuration Tool for Imaging Devices (CTFID), allows operators or technicians to change camera settings and even update firmware from virtually anywhere without need for additional wiring. For the new Ethernet versions, an embedded Web server lets the installer access all the user settings, make camera adjustments, and update firmware via a standard Web browser.

AutoDome's innovative design simplifies installation and servicing. AutoDome reduces maintenance costs because you can replace individual modules instead of entire camera assemblies. Simply pop out the old module and slide in the new ones: it's almost as easy as changing a light bulb. All tethers have been replaced with hinges, which makes installation and servicing safer and easier. You can even access the built-in power supply without taking down the dome.

### Feature Comparison Matrix

The following table provides an overview of the AutoDome camera family and its available features:

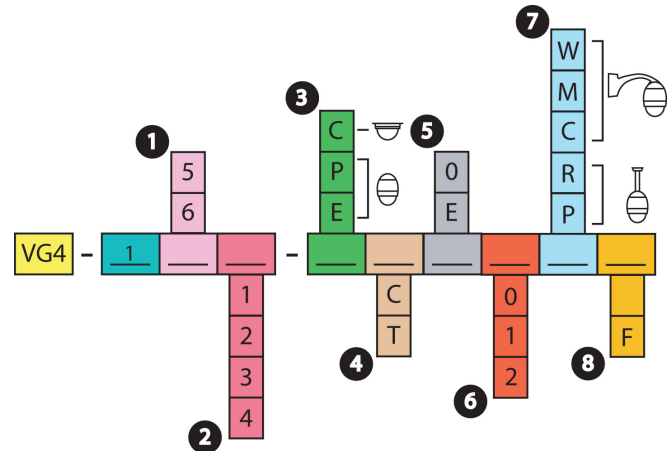
	AutoDome 100 Series	AutoDome 200 Series	AutoDome 300 Series	AutoDome 500i Series
<b>Standard Features:</b>				
Interchangeable modules	■	■	■	■
High speed PTZ		■	■	■
Preset shots		64	99	99
Guard tour		■	■	■
Alarm inputs/outputs			7/4	7/4
High resolution camera	■	■	■	■
Day/night operation	■	■	■	■
IR sensitive	■	■	■	■
SensUp extended sensitivity	■	■	■	■
UTP/coax transmission	■	■	■	■
Hybrid analog/IP connectivity	■	■	■	■
Bi-line remote configuration*	■	■	■	■
Cable compensation	■	■	■	■
Hot-swap camera modules	■	■	■	■
Ruggedized, vandal-resistant enclosure	■	■	■	■
<b>Advanced Features:</b>				
AutoTrack II motion tracking				■
Video motion detection				■
Image stabilization				■
Privacy masking and sector blanking			■	■
Advanced alarm control			■	■

\*Compatible over Coax and UTP transmission only. Remote configuration over IP via web interface.

### Certifications and Approvals

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards

### Installation/Configuration Notes



Ordering Guide

#### 1 Video Format

- 5 Fixed PAL
- 6 Fixed NTSC

#### 2 Camera Type

- 1 Color (2.7–13.5 mm)
- 2 Day/Night (2.7–13.5 mm)
- 3 Color (5–50 mm)
- 4 Day/Night (5–50 mm)

#### 3 Enclosure

- C In-ceiling<sup>2</sup>
- P Indoor Pendant
- E Outdoor Pendant

#### 4 Bubble

- C Clear Rugged
- T Tinted Rugged

#### 5 Communications

- O Fixed (coax, UTP)
- E Ethernet (TCP/IP)

1 No transformer included. Customer must supply an approved 24 VAC limited power supply (VG4-A-PSUx or equivalent). Not available with fiber optic option.

2 Recessed in-ceiling housing units do not require kit options for reference numbers 6, 7, or 8.

3 Fiber optic option is multi-mode with bi-phase. Requires LTC 4629 at the system.

4 Roof mount mounts to vertical Parapet. For flat roof installation, order an additional LTC 9230/01 Flat Roof Adapter Plate.

#### 6 Power (pendants only)

- 0 24 VAC<sup>1</sup>
- 1 120 VAC
- 2 230 VAC

#### 7 Mount Pendant

- W Wall
- M Mast
- C Corner
- R Roof<sup>4</sup>
- P Pipe
- No Mount<sup>2</sup>

#### 8 Fiber Optics

- No Fiber
- F Fiber<sup>3</sup>

## Technical Specifications

### Camera 2.7 mm-13.5 mm Color

Imager	1/3 in. Interline CCD (752 x 582 PAL)/(768 x 492 NTSC)	
<b>Lens</b>		
Iris	Automatic	
Field of View	78.3° to 18.5°	
Video Output	1.0 Vp-p, 75 Ohm	
Gain Control	Off/Auto (with adjustable limit) /manual	
Synchronization	Line-Lock (0° to 358° vertical phase adjust) or internal crystal	
Aperture Correction	Horizontal and vertical	
Horizontal Resolution	540 TVL (NTSC)/540 TVL (PAL)	
<b>Sensitivity</b> (typical)	30 IRE	50 IRE
SensUp Off	0.29 lx	0.9 lx
SensUp On	0.029 lx	0.09 lx
SNR	>50 dB	
White Balance	2500 K to 9000 K (with AWB hold mode and manual mode)	

### Camera 2.7 mm-13.5 mm Day/Night

Imager	1/3 in. Interline CCD (752 x 582 PAL)/(768 x 492 NTSC)	
<b>Lens</b>		
Iris	Automatic	
Field of View	78.3° to 18.5°	
Video Output	1.0 Vp-p, 75 Ohm	
Gain Control	Off/Auto (with adjustable limit) /manual	
Synchronization	Line-Lock (0° to 358° vertical phase adjust) or internal crystal	
Aperture Correction	Horizontal and vertical	
Horizontal Resolution	540 TVL (NTSC)/540 TVL (PAL)	
<b>Sensitivity</b> (typical)	30 IRE	50 IRE
<b>Day Mode</b>		
SensUp Off	0.29 lx	0.9 lx
SensUp On	0.029 lx	0.09 lx
<b>Night Mode</b>		
SensUp Off	0.12 lx	0.36 lx
SensUp On	0.012 lx	0.09 lx
SNR	>50 dB	
White Balance	2500 K to 9000 K (with AWB hold mode and manual mode)	

### Camera 5 mm-50 mm - Color

Imager	1/3 in. Interline CCD (752 x 582 PAL)/(768 x 492 NTSC)	
<b>Lens</b>		
Iris	Automatic	
Field of View	47.5° to 5.0°	
Video Output	1.0 Vp-p, 75 Ohm	
Gain Control	Off/Auto (with adjustable limit) /manual	
Synchronization	Line-Lock (0° to 358° vertical phase adjust) or internal crystal	
Aperture Correction	Horizontal and vertical	
Horizontal Resolution	540 TVL (NTSC)/540 TVL (PAL)	
<b>Sensitivity</b> (typical)	30 IRE	50 IRE
SensUp Off	0.42 lx	1.3 lx
SensUp On	0.042 lx	0.13 lx
SNR	>50 dB	
White Balance	2500 K to 9000 K (with AWB hold mode and manual mode)	

### Camera 5 mm-50 mm Day/Night

Imager	1/3 in. Interline CCD (752 x 582 PAL)/(768 x 492 NTSC)	
<b>Lens</b>		
Iris	Automatic	
Field of View	47.5° to 5.0°	
Video Output	1.0 Vp-p, 75 Ohm	
Gain Control	Off/Auto (with adjustable limit) /manual	
Synchronization	Line-Lock (0° to 358° vertical phase adjust) or internal crystal	
Aperture Correction	Horizontal and vertical	
Horizontal Resolution	540 TVL (NTSC)/540 TVL (PAL)	
<b>Sensitivity</b> (typical)	30 IRE	50 IRE
<b>Day Mode</b>		
SensUp Off	0.42 lx	1.3 lx
SensUp On	0.042 lx	0.13 lx
<b>Night Mode</b>		
SensUp Off	0.17 lx	0.52 lx
SensUp On	0.017 lx	0.052 lx
SNR	>50 dB	
White Balance	2500 K to 9000 K (with AWB hold mode and manual mode)	

**Mechanical/Electrical**

Model	In-Ceiling	Indoor Pendant	EnviroDome®
Weight	5.86 lb (2.66 kg)	6.3 lb (2.88 kg)	7.3 lb (3.32 kg)
Pan Range	360° cont.	360° cont.	360° cont.
Tilt Angle	1° above horizon	18° above horizon	18° above horizon
Power	21-30 VAC 50/60 Hz	21-30 VAC 50/60 Hz	21-30 VAC 50/60 Hz
<b>Power Draw: (typ)</b>			
Analog Models	7.5 W	7.5 W	43.5 W <sup>5</sup>
Ethernet Models	11.5 W	11.5 W	47.5 W <sup>5</sup>

5 Add 16 W if using VG4-SHTR-XT kit.

**Surge Suppression**

Protection on Video	Peak current 10 kA (Gas Tube Arrester), peak power 1000 W (10/1000i)
Protection on Power Input (Dome)	Peak current 7.3 A, peak power 600 W (10/1000i)
Protection on Power Output (Arm Power Supply)	Peak current 21.4 A, peak power 1500 W (10/1000i)

**Environmental**

Model	In-Ceiling	Indoor Pendant	EnviroDome®
Design Rating	IP54	IP66	IP66
Operating Temp.	-10°C to 50°C (14°F to 122°F)	-10°C to 50°C (14°F to 122°F)	-40°C to 50°C (-40°F to 122°F)
Storage Temp.	-10°C to 60°C (14°F to 140°F)	-10°C to 60°C (14°F to 140°F)	-40°C to 60°C (-40°F to 140°F)
Humidity	0% to 90% relative, non- condensing	0% to 90% relative, non- condensing	0% to 100% relative, condensing

**Miscellaneous**

Communications Protocols Bilinx<sup>6</sup>

6 Bilinx not available on Ethernet models.

**User Connections**

Power (Camera)	21-30 VAC, 50/60 Hz
Power (Heater)	21-30 VAC, 50/60 Hz
Video	BNC/UTP <sup>7</sup>
Audio Line In <sup>8</sup>	9 K ohm typ, 5.5 Vp-p max

7 Ethernet models have no UTP analog output only BNC (coax).

8 With Ethernet models, the bi-phase ± can optionally be used as the audio line in connector.

**Mounts/Accessories****Pendant Arm Mounts**

Wall Arm (No Transformer)	ENV-PA0
Wall Arm (120/230 VAC Transformer)	VGA-A-PA1 / VG4-A-PA2
Wall Arm (120/230 VAC Transformer and Fiber Optics)	VGA-A-PA1F / VG4-A-PA2F

**Optional Mounting Plates for Arm Mounts**

Corner Mounting Plate	LTC 9542/01
Mast (Pole) Mounting Plate	LTC 9541/01

**Pendant Pipe Mounts**

Pipe Mount Cap	VG4-A-9543
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**Pendant Roof Mounts**

Roof (Parapet) Mount	VG4-A-9230
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**Optional Mounting Plates for Roof Mounts**

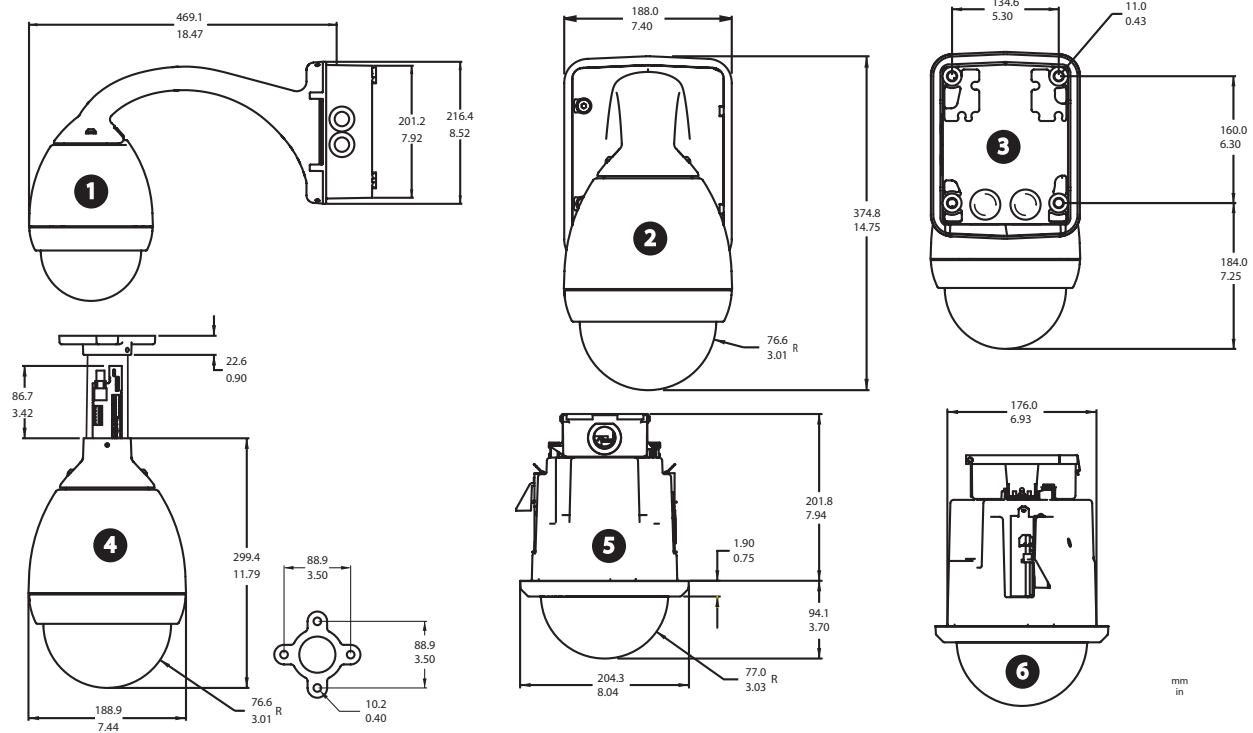
Flat Roof Adapter for Parapet Mount	LTC 9230/01
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**Power Supplies**

Outdoor Power Supply Box (120/230 VAC Transformer)	VG4-A-PSU1 / VG4-A-PSU2
Outdoor Power Supply Box (120/230 VAC Transformer and Fiber Optics)	VG4-A-PSU1F / VG4-A-PSU2F
Extended temp heater module extends temperature range to -55°C (-67°F) for EnviroDome® only	VG4-SHTR-XT

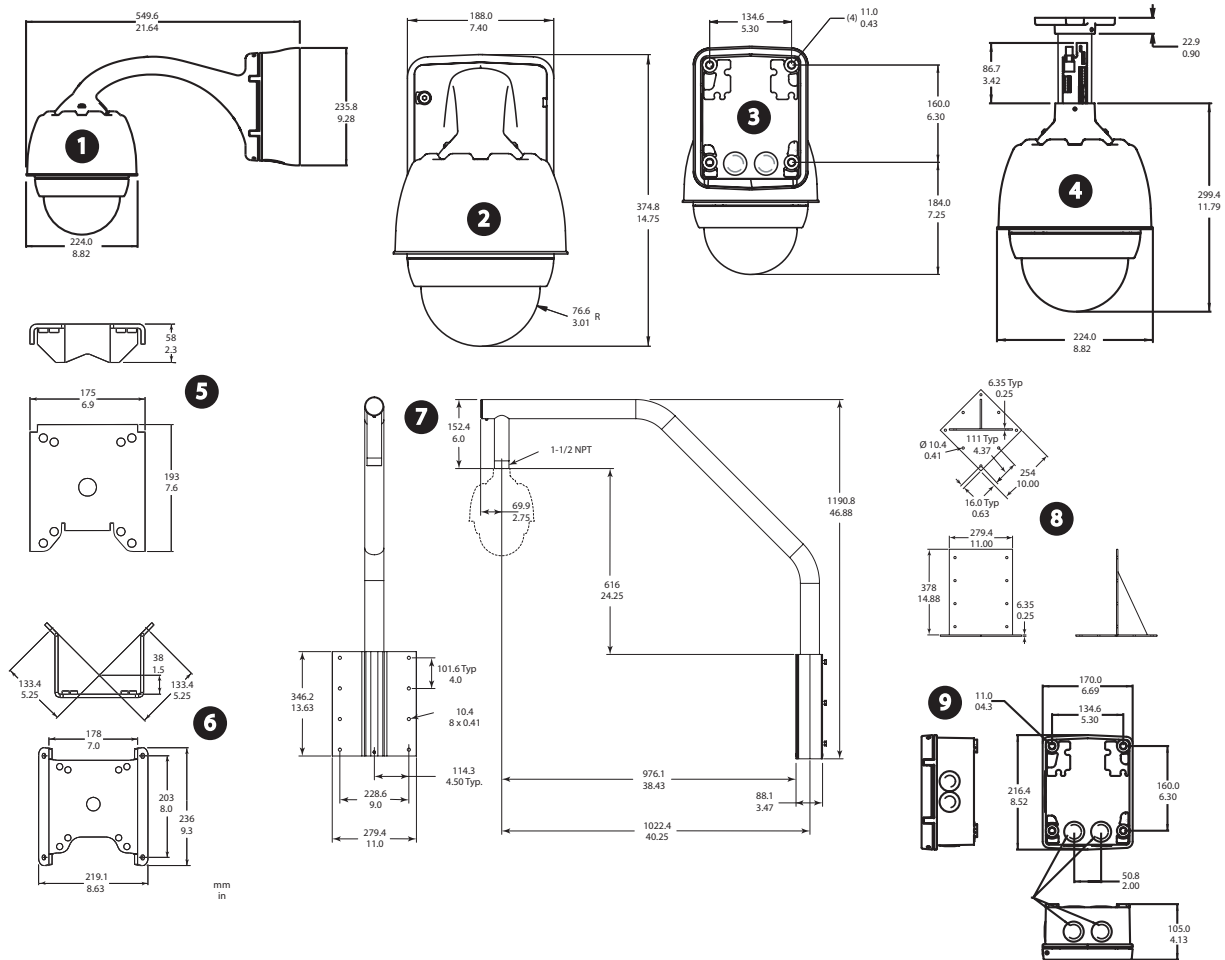
**Fiber Optic Models**

Optical Fiber Compatibility	50/125 mm, 62.5/125 mm, low loss multimode glass fiber, rated for a minimum system bandwidth of 20 MHz (video 850 nm/Control 1300 nm)
Max Distance	4 km (2.5 miles)



Indoor System Dimensions

Reference	Description	Reference	Description
1	Wall Mount – Side with power supply and trim skirt removed	4	Pipe Mount
2	Wall Mount – Front with power supply and trim skirt	5	In-ceiling Mount – Front
3	Wall Mount – Back with power supply and trim skirt	6	In-ceiling Mount - Side



### Outdoor System Dimensions

Reference	Description	Reference	Description
1	Wall Mount – Side with power supply and trim skirt	6	Corner Mount
2	Wall Mount – Front with power supply and trim skirt	7	Roof Mount
3	Wall Mount – Back with power supply and trim skirt	8	Roof Mount Adapter
4	Pipe Mount	9	Power Supply for Pipe and Roof Mounts
5	Mast Mount		

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